MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2018/2019

DPA5018 – PROGRAMMING FOR BUSINESS APPLICATIONS

(FCI & FIST students)

26 OCTOBER 2018
09.00 AM – 11.00 AM
2 HOURS

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **10** pages.
2. There are 3 sections, attempt **ALL** questions.
3. Write your answers in the Answer Booklet provided.

Section A: Multiple Choice Questions (Total: 30 Marks)

Instruction: Choose the best answer. Write your answers in the Answer Booklet provided.

1. _____ is a set of instruction that directs a computer to perform specific operations.

   A. Hardware
   B. Software
   C. Pseudocode
   D. Algorithm

2. The _____ structure is the construct where statements can be executed or skipped depending on whether a condition evaluates to true or false.

   A. sequence
   B. skipped
   C. selection
   D. repetition

3. Which of the following are **TRUE** about forms and controls in Visual Basic?

   I. They are graphical objects.
   II. Buttons can be created with drag and drop method.
   III. They are pre-built.
   IV. Controls cannot be removed once placed into a form.

   A. I and II
   B. I, II, and III
   C. I, II, and IV
   D. All of the above

4. A(n) _____ property of a control determines the order in which controls receive the focus during tabbing.

   A. tabIndex
   B. tabStop
   C. indexNum
   D. TextAlign

5. What will be displayed by the textbox *txtDisplay* after the execution of the statements below?

```
Dim num1 As Double = 5.2
Dim num2 As Double = 4.0
num2 = CInt(num1 * 2)
txtDisplay.Text = num2
```

   A. 4.0
   B. 8
   C. 10.4
   D. 10

6. Given variable declarations as below, which of the conditional statements returns **TRUE**?

```
Dim num1 As Double = 5.2
Dim num2 As Double = 4.0
Dim bool As Boolean = False
```

Continued.....

A. `(num1 + num2 > 10) Or (num1 > 10)`
B. `(num1 + num2 > 10) And (num1 > 10)`
C. `(num1 + num2 > 10) And (Not bool)`
D. `(num1 + num2 > 10) Or (Not bool)`

7. What happens when a parameter in a procedure is declared *ByRef*?

A. A value of the argument is passed to the procedure.
B. The same memory location as the argument is passed to the procedure.
C. Only arguments of numeric data types are allowed.
D. All variables are reset to NULL.

8. Which of the following are **TRUE** about loop statements?

I. Used to repeat a sequence of statements a number of times.
II. Repeats a sequence of statements either as long as or until a certain condition is true.
III. For each iteration, a loop counter variable can only be increased by 1.
IV. A "`For`" loop structure must be paired with an "`End For`".

A. I and II
B. I, II, and III
C. I, II, and IV
D. All of the above

9. Given statements as below, what will be the value of *data(5)*?

```
Dim data(), str As String
str = "The quick brown fox jumps over the lazy dog"
data = str.Split(" ")
```

A. jumps
B. over
C. The quick brown fox jumps
D. jumps over the lazy dog

10. Which of the following is a valid statement to display a dialog box that prompts the user to open a file?

A. `openFileDialog1.Display()`
B. `openFileDialog1.ShowDialog()`
C. `openFileDialog1.Show()`
D. `openFileDialog1.Open()`

11. _____ uses English-like phases with some Visual Basic terms to outline the task.

A. Flow chart
B. Hierarchy chart
C. Pseudocode
D. Software

Continued.....

12. _____ is a step-by-step series of instructions or procedures for solving a problem.

A. Software
B. Application
C. Project
D. Algorithm

13. Sequence of instructions executed in Visual Basic program is controlled by _____.

A. properties
B. events
C. methods
D. solutions

14. Which of the statement is used to change a title of a form named "`frmMain`" to *Main Page*?

A. `frmMain.Text = "Main Page"`
B. `Me.Text = "Main Page"`
C. `formMain.Title = "Main Page"`
D. `Me.Title = "Main Page"`

15. Which of the following is a valid statement to enable an Option Strict in order to restrict implicit data type conversions to only widening conversions?

A. `Option Strict = "On"`
B. `Option Strict On`
C. `Option Strict = "Enable"`
D. `Option Strict`

16. A variable declared inside an `If` or `Select Case` block has _____ scope. The variable cannot be referred to outside of the block.

A. block-level
B. global-level
C. local-level
D. event-level

17. Which of the following is **NOT** a type of procedure in Visual Basic?

A. Event
B. Function
C. Sub
D. Click

18. What will be the value of variable `result` after the execution of the statements below?

```
Dim result as Integer = 0
For i = 0 To 10 Step 2
     result = result + i
Next
```

A. 0
B. 10
C. 30
D. 55

Continued.....

19. Which of the following are principles of designing a database?

I. Data should usually be stored in their smallest parts.
II. Avoid redundancy.
III. Avoid tables with intentionally blank entries.
IV. Avoid fields whose values can be calculated from existing fields.

A. I and II
B. I, II, and III
C. I, II, and IV
D. All of the above

20. Which of the following is **NOT** a text file mode?

A. OpenText
B. CreateText
C. CombineText
D. AppendText

21. _____ is a block of code that is executed in response to an event.

A. Function procedure
B. Sub procedure
C. Property procedure
D. All of the above

22. How many values can a function procedure returns?

A. 0
B. 1
C. 2
D. As many values

23. The methodology where code is broken into small, logical procedures is called:

A. Event-driven programming
B. Functional programming
C. Modular programming
D. Procedural programming

24. The methodology where code is broken into small, logical procedures is called:

A. Event-driven programming
B. Functional programming
C. Modular programming
D. Procedural programming

25. _____ repeats a block of statements for each element of an array or for each item in a collection.

A. `For..Next loop`
B. `Do while...loop`
C. `For each loop`
D. `Do until... loop`

Continued.....

26. A table is a rectangular array of data. Each column of table called a _____ which contains the same type of information, while each row called a _____ which contains all information about one entry in the table.

A. field, record
B. record, field
C. property, data
D. data, attribute

27. A _____ handles retrieving and updating the data in a file.

A. record source
B. connector
C. table adaptor
D. binding source

28. Which of the following is **CORRECT** statement for a load event procedure of form named frmMain?

A. Private Sub frmMain_Load (...) Handles frmMain.Load
B. Private Sub frmMain_Load (...) Handles Me.Load
C. Private Sub frmMain_Load (...) Handles MyBase.Load
D. Private Sub frmMain_Load(...)

29. Which of the following is **FALSE** about passing arrays to procedures?

A. An entire array can be passed to a Sub or Function procedure.
B. The calling statement uses the name of the array without parentheses.
C. The header of the Sub or Function procedure uses the name with an empty set of parentheses.
D. None of the above.

30. Which property of OpenFileDialog control specifies the choices in the "Files of type" dropdown box?

A. FileName
B. FilterIndex
C. FileType
D. Filter

Continued.....

Section B: True/False Questions (Total: 10 Marks)

Instruction: Answer T for TRUE and F for FALSE statements. Write your answers in the Answer Booklet provided.

1.	***TextBox1.Enabled = False*** will make ***TextBox1*** invisible.
2.	When the user click a button in form created, event is triggered.
3.	The recommended prefix for the name of a button control is ***btn***.
4.	The statement ***btnButton.Focus()*** has the same effect as clicking on the button *btnButton*
5.	**MessageBox.Show("Hello", "Morning")** The word *Morning* will be prompt and displayed in the message box.
6.	The following statement is valid where *dim* and *mouse* are variables of the same type. **Dim = Mouse**
7.	The empty string is the default value for String variables.
8.	The Mod operator denoted by the "/", returns only the integer remainder after long division.
9.	**FormatNumber(7331.56789, 3)** will produce the value **7,331.567.**
10.	The statement **lstBox.Items.Add("Programming")** displays word in the list box.

Continued.....

Section C: Structured Questions (Total: 60 Marks)

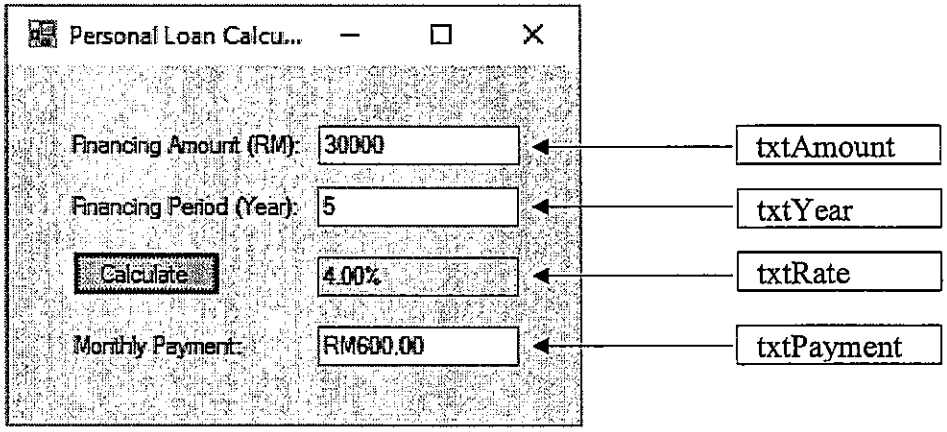
Instruction: Answer ALL questions in the Answer Booklet provided.

QUESTION 1 [20 Marks]

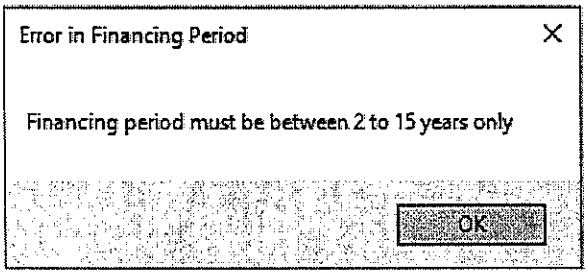
This application calculates the monthly payment for a personal loan. The interest rate is determined based on the financing period as shown in the table below.

Financing Period	Interest Rate
Minimum of 2 years up to 4 years	3.80%
5 years	4.00%
6 years	4.02%
7 years	4.05%
8 years	4.10%
9 years and up to maximum of 15 years	4.50%

- User will key in the Financing Amount and the Financing Period.
- When the *Calculate* button is clicked, the respective Interest rate and the monthly payment will be displayed as the output.
- Based on the sample output below the monthly payment is calculated as (30000 * (1 + (0.04 * 5 years)) / 60 months).



- If the user keyed in Financing Period not according to the terms and conditions, which is between 2 to 15 years, a message box will appear as shown below.



Continued.....

QUESTION 2 [20 Marks]

a. A computer store sells DVD at RM1 each for small orders or RM0.55 each for orders of 100 DVD or more.

i. Draw a prototype of the system which requests the number of DVD ordered and display the total cost both in a textbox. Labelled the textboxes and the button used in the system. [4 Marks]

ii. Write the code to calculate and display the total cost when the event button is clicked. Use if else statement to determine the price of the DVD. [5 Marks]

iii. Add in the code to change the font colour of the total cost in blue colour. [1 Marks]

iv. Assume the following declaration. [10 Marks]

```
Dim x As Integer = 7, y As Integer = 10, z As Integer = 0
Dim a As Double = 6.0, b As Double = 4.0, c As Double = 12.0
```

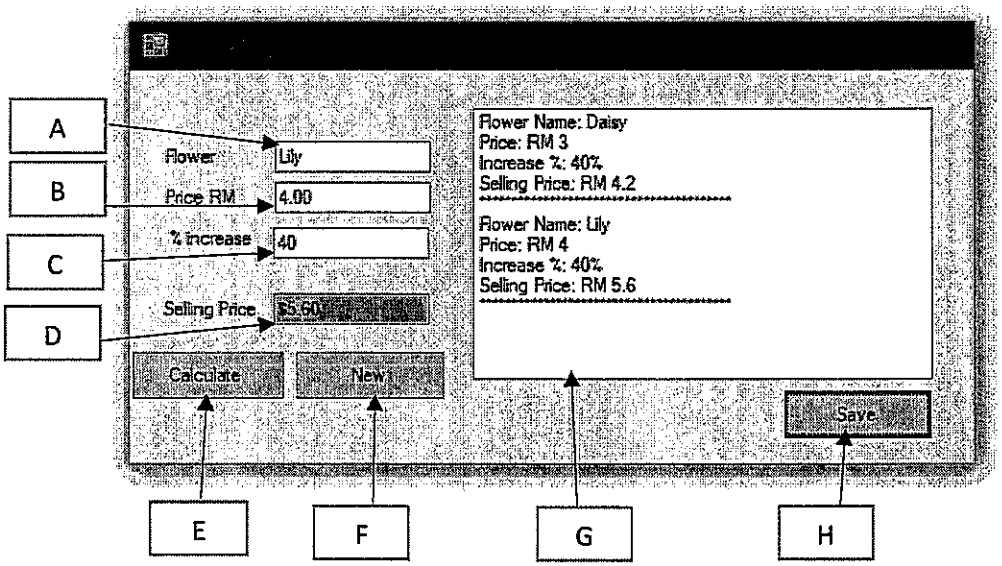
Enter the values in respective variable that have changed in each column in every question.

Statement	x	y	z	a	b	c
Initialized value	**7**	**10**	**0**	**6.0**	**4.0**	**12.0**
x = a + 5 y = y * 2 //Example	**11**	**20**				
a += 5.0 z = 10.0 + a						
b = 15 / (3 + 2) * (14 \ 2) x = y + 6 * (4 + 1 * 2) / 3						
y = 5.0 + (13 * 5.0) Mod (7.0 - 4.0) c = (z - 12) * 2 \ 3						
a = Math.Sqrt(((x + 7) / (5 * 2)) - 2) b = z * 2 + y Mod 3						
c = (a \ y) + (b - c) z = 65 Mod (3 * 2) + 4						

Continued.....

QUESTION 3 [20 Marks]

a. Create a Window application which will calculate the selling price for a floral shop.



	Control Name
A	txtFlower
B	txtPrice
C	txtSellDis
D	txtSellP
E	btnCalculate
F	btnNew
G	lsbDisplay
H	btnSave

Code guidance	
1.	Create a structure Flower as a class level scope with four variables a. Fname as string to store the flower name b. Price as double to store the flower cost price c. SellPrice as double to store new flower selling price d. IncPercent as double to store the increase percentage
2.	In the btnNew event procedure, call sub procedure ClearInput(). a. In Sub procedure ClearInput() : i. Clear all the textboxes ii. Set focus back to textbox txtFlower
3.	In the btnCalculate event procedure: a. Get the price and the percent increase from the user input.

Continued.....

	b. Calculate the selling price. c. Display the selling price in the textbox txtSellP with two decimal point
4.	Declare sw variable as a streamwriter class and create a text file name FLOWER.txt
5.	In the button btnSave event procedure: a. Call private sub SafeRecord() b. In SafeRecord() procedure : i. Declare Bunga as a variable of the containing structure Flower. ii. Get all the data from the textboxes. iii. Save the data into the text file FLOWER.txt iv. Display all data into the lsbDisplay listbox.

i. Write the code to declare ***sw*** as a variable for a streamwriter class and create a file name **FLOWER.txt.** [2 Marks]

ii. Write a code segment for structure **FLOWER.** [3 Marks]

iii. Write the code segment for ***btnNew*** event procedure. [4 Marks]

b. Write the code segment for ***btnCalculate*** event procedure [3 Marks]

c. Write the code segment for ***btnSave*** event procedure. [8 Marks]

End of page